

CITY OF BISMARCK

Bismarck

Stormwater Design Standards Manual Update



Introduction

1. Purpose and Need
2. Project Roles
 - a) City Working Group
 - b) AE2S|HDR
 - c) Public Input
3. Materials Are Available on the City Website at <http://www.bismarcknd.gov/index.aspx?NID=1603>

STORMWATER DESIGN STANDARDS MANUAL UPDATE



Revision Process & Timeline

	DATE	2016									2017
		MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	
City Working Group Kick-Off Meeting	Mon, May 9	◆									
Public Kick-Off Meeting and Comment Period	Thurs, June 2 - Thurs, June 16		■								
TM 200 Draft Submittal	Thurs, June 23		★								
TM 200 Working Group Review Meeting	Thurs, June 30		◆								
TM 200 Final	Fri, July 8			★							
TM 300 Draft Submittal	Thurs, July 21			★							
TM 300 Working Group Review Meeting	Thurs, July 28			◆							
TM Final 200/Draft 300 Public Meeting	Thurs, Aug 4				◆						
TM 300 Final	Fri, Aug 12				★						
TM 400 Draft Submittal	Thurs, Aug 18				★						
TM 400 Working Group Review Meeting	Thurs, Aug 25				◆						
TM 300 Final/TM 400 Draft Public Meeting	Thurs, Sept 1					◆					
TM 400 Final	Thurs, Sept 8					★					
TM 500 Draft Submittal	Thurs, Sept 29						★				
TM 500 Working Group Review Meeting	Thurs, Oct 6						◆				
TM 400 Final/TM 500 Draft Public Meeting	Thurs, Oct 20							◆			
TM 500 Final	Fri, Oct 28							★			
SWDSM Draft Outline Submittal	Fri, Oct 28							★			
SWDSM Draft Submittal	Thurs, Nov 17								★		
SWDSM Working Group Review Meeting	Thurs, Dec 1								◆		
SWDSM Public Meeting	Thurs, Dec 15									◆	

◆ INTERNAL MEETING

◆ PUBLIC MEETING

★ MILESTONE SUBMITTAL

STORMWATER DESIGN STANDARDS MANUAL UPDATE



Contacts for Written Comments



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- 1. Revised SWDSM Goals**
- 2. Stormwater Permits**
- 3. Application Procedures**
- 4. SWDSM Structure**
- 5. Questions**

STORMWATER DESIGN STANDARDS MANUAL UPDATE



Stormwater Program Overview

PUBLIC SAFETY

**PROTECTION OF PUBLIC AND
PRIVATE PROPERTY**

**MS4/WATER QUALITY
REQUIREMENTS**

**TITLE 14.1
STORMWATER MANAGEMENT ORDINANCE**



**STORMWATER DESIGN
STANDARDS MANUAL**



Goals of the Revised SWDSM

1. Provide uniform requirements for development and redevelopment
2. Reduce application review times and resubmittals
3. Submit the applicable information at the correct times
4. Concise Performance Requirements, Design Standards, and acceptable Analysis Methodologies for stormwater BMPs



Revised SWDSM Content Selection Criteria

1. Design Engineer and Reviewer have a working knowledge of stormwater management
2. Guide preparation of stormwater permits for development
3. Applies to the majority of development situations
4. Adopted Watershed Master Plans contain additional requirements

STORMWATER DESIGN STANDARDS MANUAL UPDATE



Stormwater Permits Required

CITY OF BISMARCK STORMWATER PROGRAM

PUBLIC SAFETY & WELL BEING

PROTECTION OF PROPERTY

STATE & FEDERAL LAWS

CITY OF BISMARCK

ZONING ORDINANCE TITLE 14.1 STORMWATER MANAGEMENT



CONSTRUCTION STORMWATER MANAGEMENT PERMITS

POST-CONSTRUCTION STORMWATER MANAGEMENT PERMITS

SMALL SITE

Land Disturbing Activities Greater than 3,000 sf and Less than 10,000 sf

LARGE SITE

Land Disturbing Activities Greater than 10,000 SF

EXPEDITED APPLICATION

Conforms to Adopted Master Plan

STANDARD APPLICATION

20,000 sf or greater new impervious surfaces



PCSMP Application Procedures

1. PCSMP application is multiple steps
2. PCSMP are applicable to Site Plan and Plat Applications
3. Standard PCSMP review and approval is a 28-day process
4. Goal is to reduce the number of resubmittal and review cycles



MANDATORY STORMWATER SCOPING SHEET

1. Master Plan Criteria
2. Site Specific Analysis Requirements
3. Identify Point of Analysis
4. Identify Known Issues with the Public Storm Sewer System

7-Day Approval Process



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7-Day Approval Process



PCSMP APPLICATION MATERIALS

1. Stormwater Permit Application & Fee
2. PCSMP Application Checklist
3. Approved Mandatory Stormwater Scoping Sheet
4. Stormwater Management Plan (SWMP)

28 Day Process – (7 Day Completeness Review + 21 Day Approval Review)

Deficient Application Allowed One Revision/Resubmittal



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**PCSMP CONDITIONAL
APPROVAL**



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PCSMP CONDITIONAL APPROVAL

Post-Construction Stormwater BMPs Installed



PCSMP APPLICATION MATERIALS AFTER CONDITIONAL APPROVAL

1. Construction Plans & Basis of Design Memo for Private or Public Improvements
2. Operations and Maintenance Manuals/Plans for Post Construction Stormwater BMPs
3. Access & Drainage Easements (If Required)
4. Geotechnical or Hydrogeological Report (If Required to Support Infiltration BMPs)

45-Day Approval Process



MANDATORY STORMWATER SCOPING SHEET

1. Master Plan Criteria
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7-Day Approval Process



PCSMP APPLICATION MATERIALS

1. Stormwater Permit Application & Fee
2. PCSMP Application Checklist
3. Approved Mandatory Stormwater Scoping Sheet
4. SWMP - Simplified to Report Compliance with Previous Master Plans
5. Basis of Design Report
6. Construction Plans
7. O&M Manual for Post Construction BMPs
8. Access and Drainage Easements (If Required)
9. Geotechnical or Hydrogeological Report (If Required to Support Infiltration BMPs)

28 Day Process – (7 Day Completeness Review + 21 Day Approval Review)

Deficient Application Allowed One Revision/Resubmittal

PCSMP CONDITIONAL APPROVAL



Post-Construction
Stormwater
BMPs Installed



PCSMP CERTIFICATION REPORT

1. Narrative and Revised Modeling to Verify Critical Elevations
2. Statement that Post-Construction BMPs are function/not function as intended.
3. Record Drawings of BMP's discharging to the City's Public Storm Water System

45-Day Approval Process

**PCSMP
FINAL APPROVAL**



MANDATORY STORMWATER SCOPING SHEET

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2. Site Specific Analysis Requirements
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7-Day Approval Process



PCSMP APPLICATION MATERIALS

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PCSMP CONDITIONAL APPROVAL



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45-Day Approval Process

Post-Construction Stormwater BMPs Installed



PCSMP APPLICATION MATERIALS AFTER CONDITIONAL APPROVAL

1. Construction Plans & Basis of Design Memo for Private or Public Improvements
2. Operations and Maintenance Manuals/Plans for Post Construction Stormwater BMPs
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45-Day Approval Process

PCSMP FINAL APPROVAL



PCSMP Within the Plat Process?



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7-Day Approval Process



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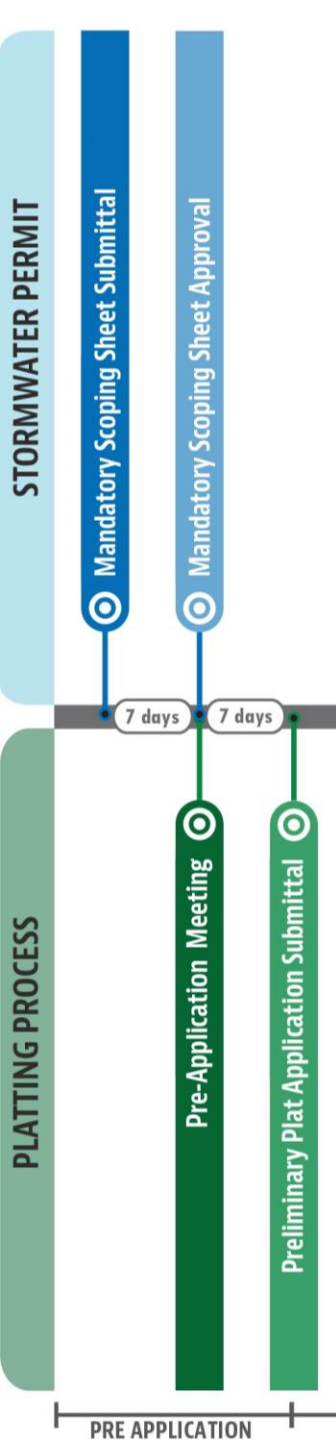
PLATTING PROCESS

STORMWATER PERMIT

Pre-Application Meeting

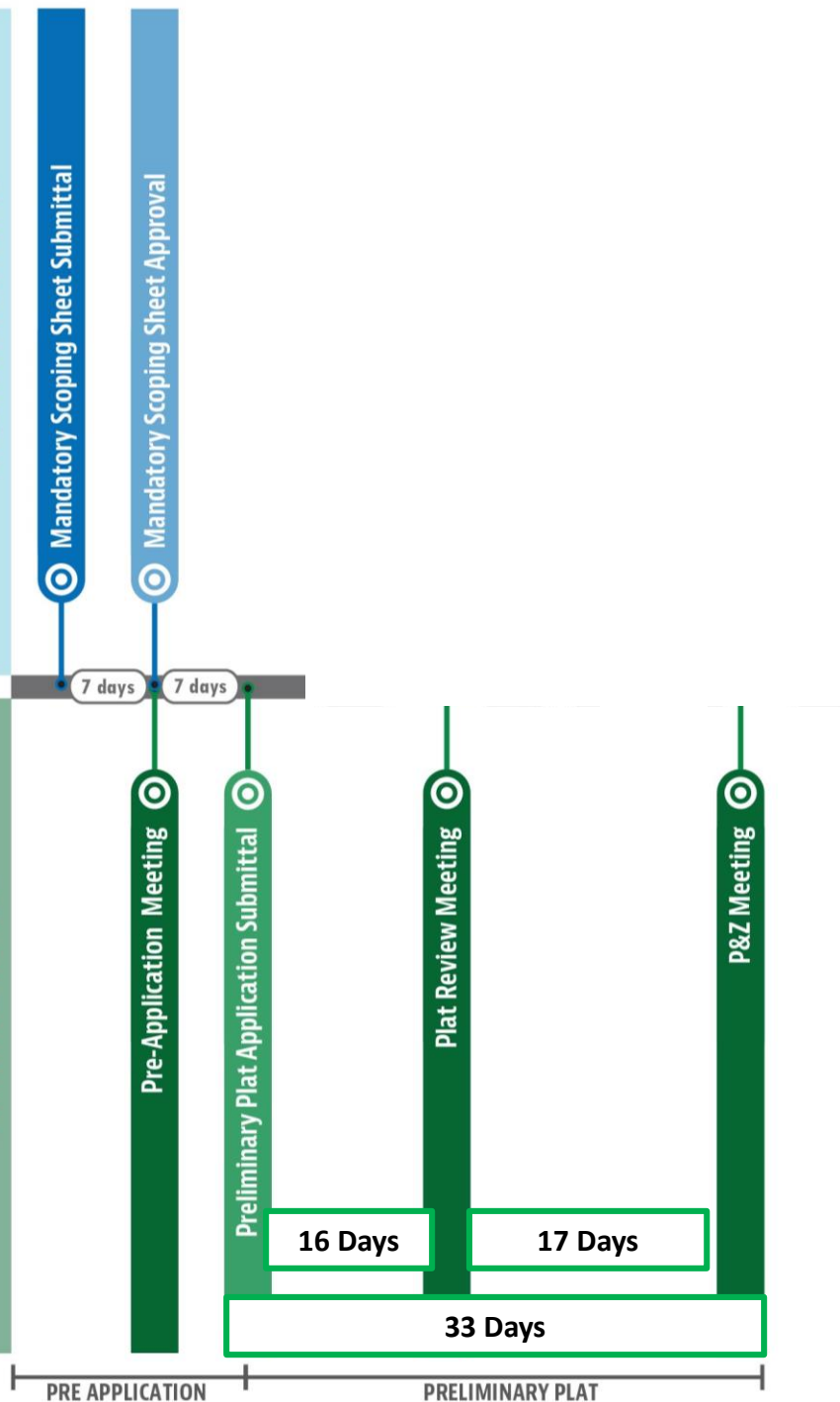
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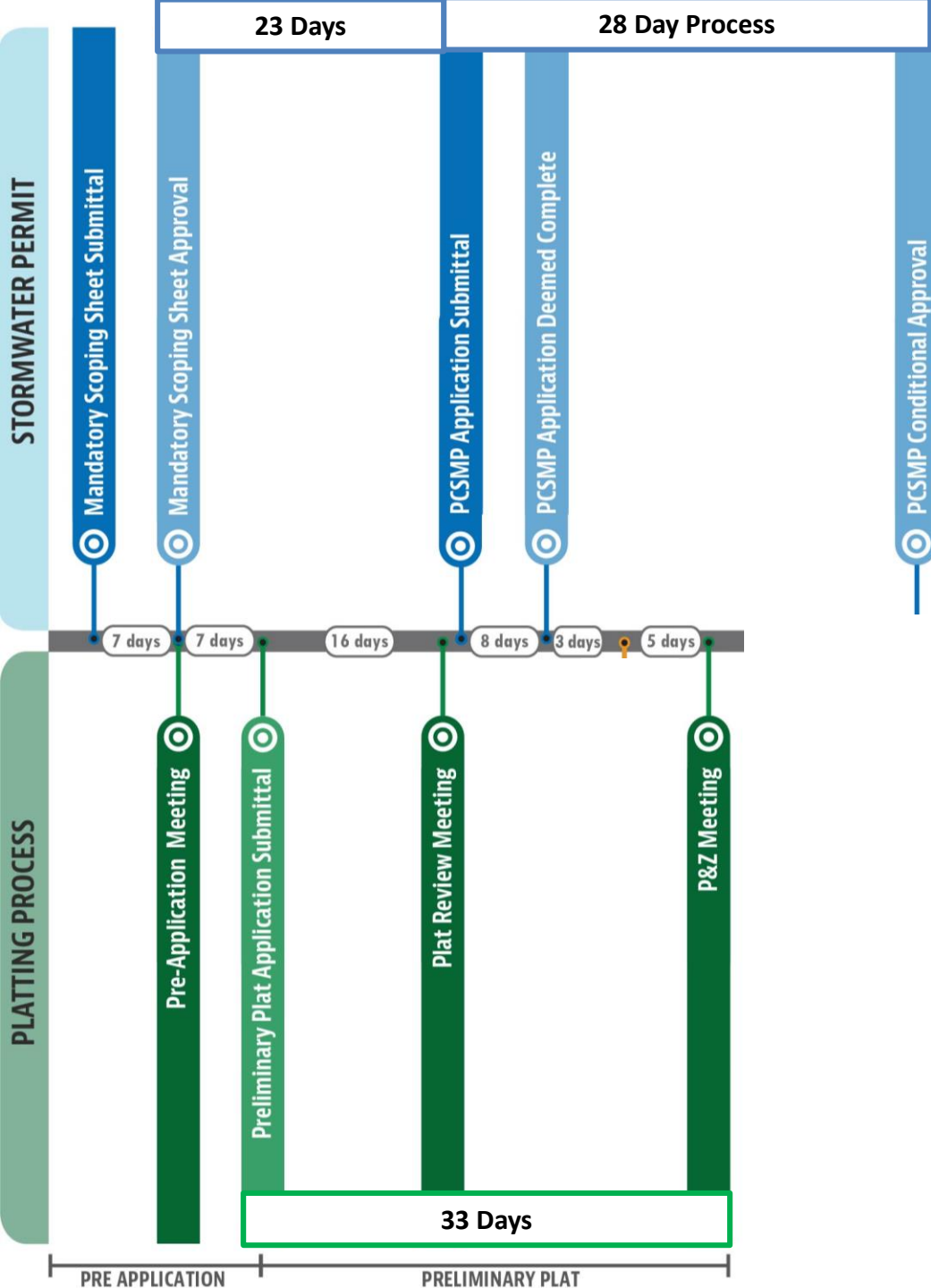
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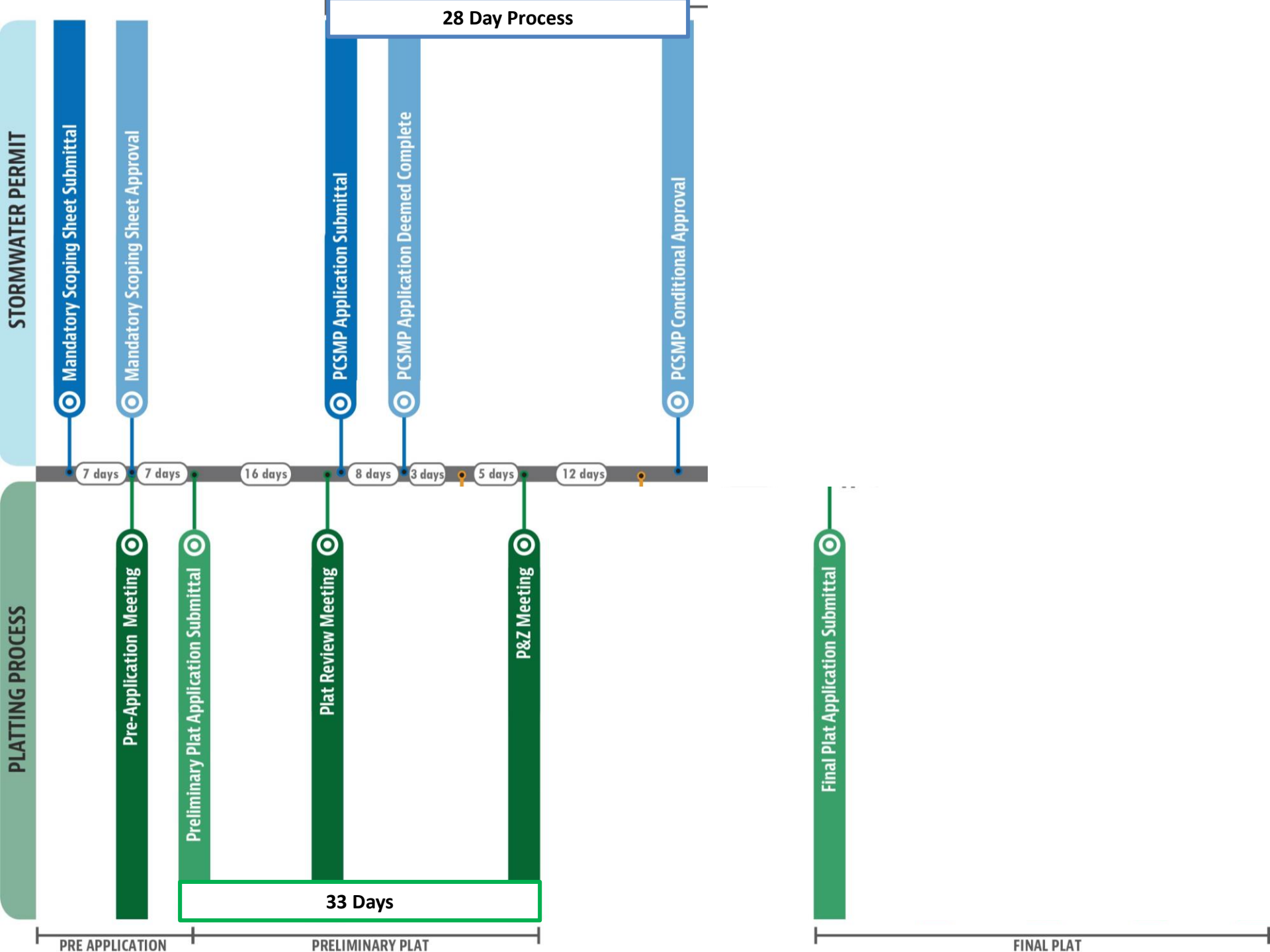


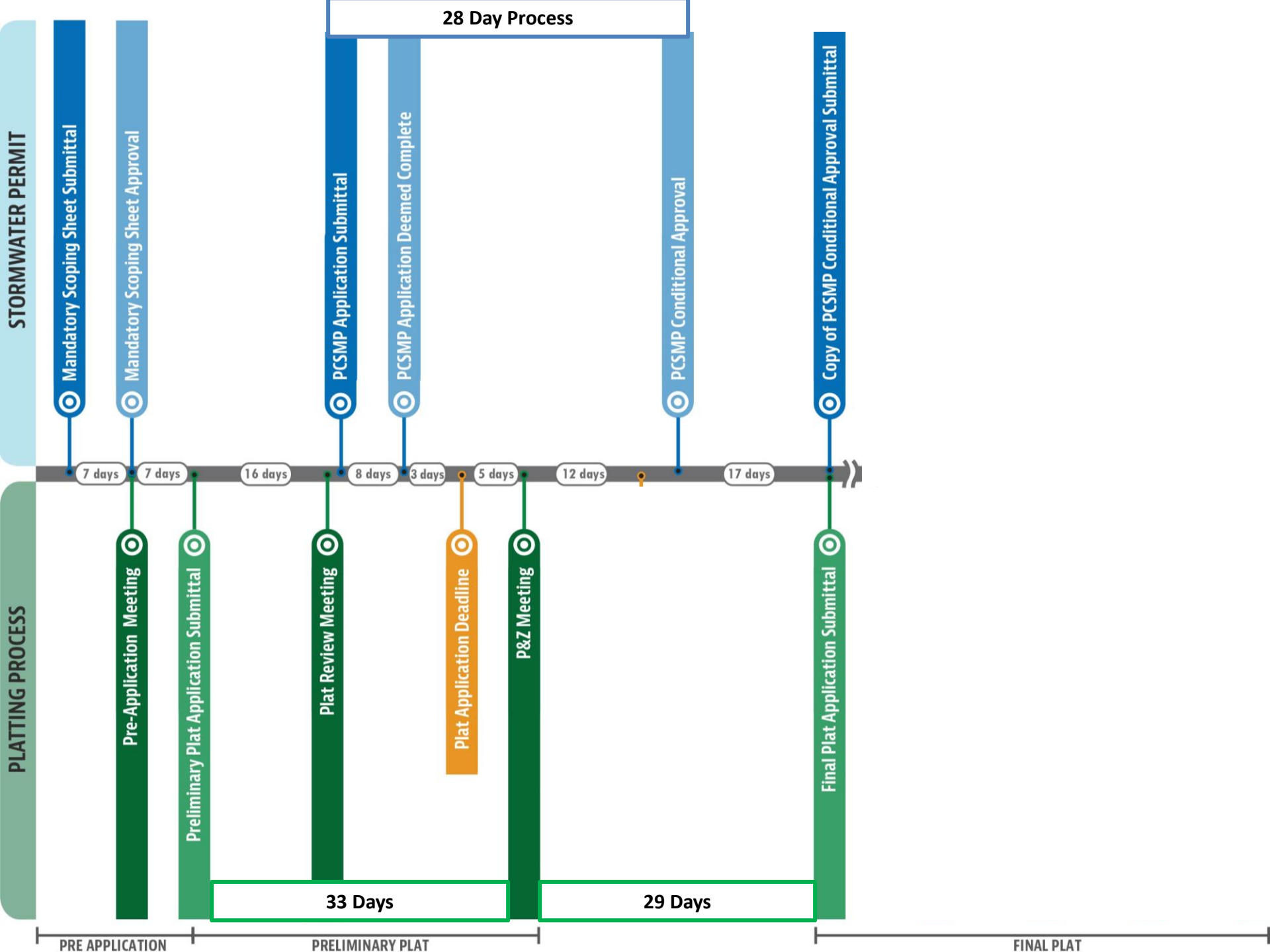
STORMWATER PERMIT

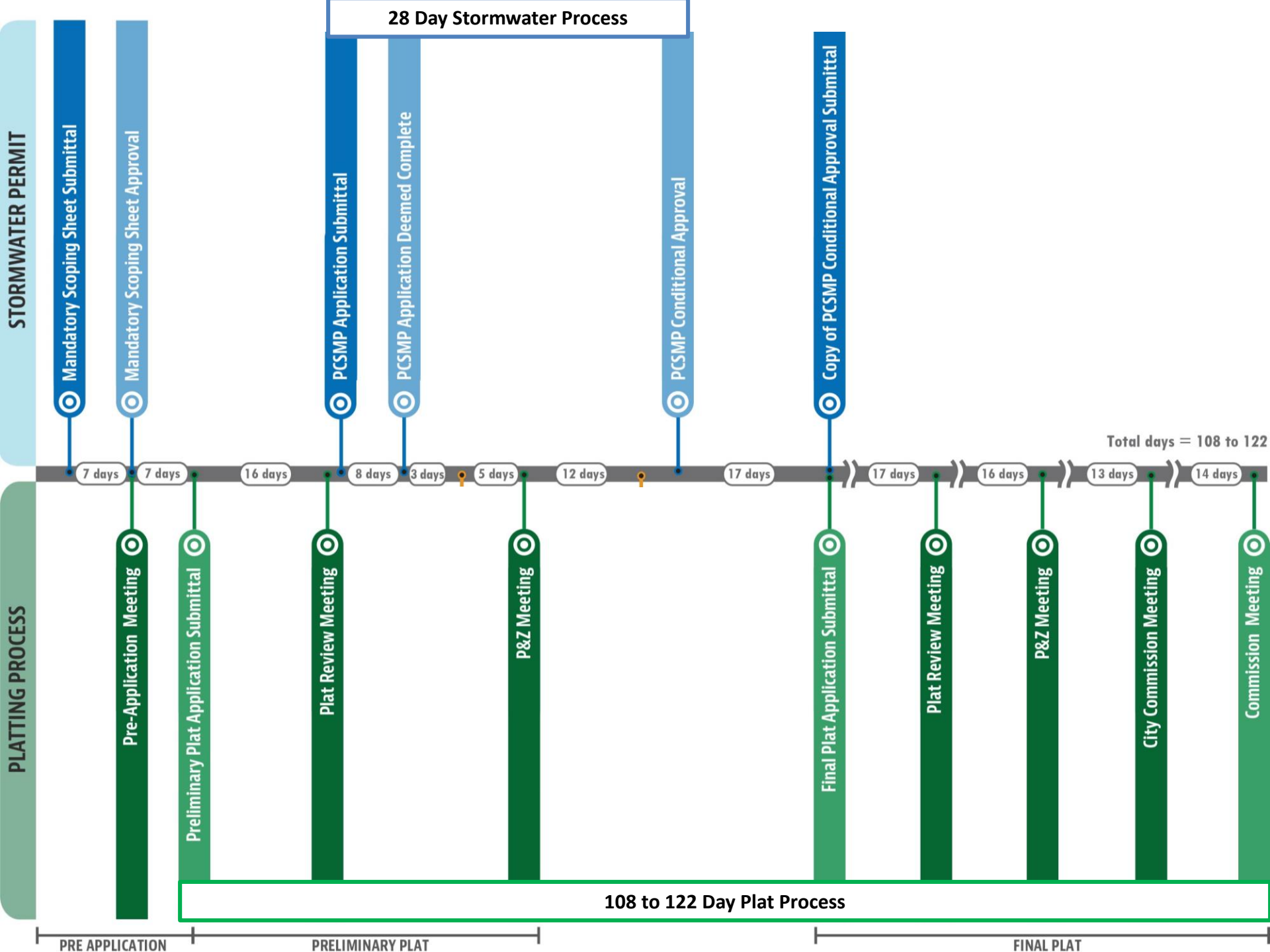
PLATTING PROCESS













Revised SWDSM Arranged by Topic

- Section 4 Post-Construction Peak Discharge Compliance
- Section 5 Post-Construction Water Quality
- Section 6 Post-Construction Drainage & Conveyance Compliance
- Chapter 7 – Construction Stormwater Control

STORMWATER DESIGN STANDARDS MANUAL UPDATE



Revised SWDSM Uniform Section Format

Performance Requirements

Criteria to be Documented by Analysis

Design Standards

Function, Construction, and Operation

Analysis Methods

Procedures and Approved Software

References

Checklists and Reference Materials

